

EEEEEEEEEEEE	RRRRRRRRRR	FFFFFFFFFF
EEEEEEEEEEEE	RRRRRRRRRR	FFFFFFFFFF
EEEEEEEEEEEE	RRRRRRRRRR	FFFFFFFFFF
EEE	RRR	FFF
EEEEEEEEEEEE	RRRRRRRRRR	FFFFFFFFFF
EEEEEEEEEEEE	RRRRRRRRRR	FFFFFFFFFF
EEEEEEEEEEEE	RRRRRRRRRR	FFFFFFFFFF
EEE	RRR	FFF
EEEEEEEEEEEE	RRR	FFF
EEEEEEEEEEEEE	RRR	FFF
EEEEEEEEEEEEE	RRR	FFF

FILEID**ROLLUP

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RRRRRRRR	000000	LL	LL	UU	PPPPPPPP	
RRRRRRRR	000000	LL	LL	UU	PPPPPPPP	
RR RR	00 00	LL	LL	UU	PP	PP
RR RR	00 00	LL	LL	UU	PP	PP
RR RR	00 00	LL	LL	UU	PP	PP
RR RR	00 00	LL	LL	UU	PP	PP
RRRRRRRR	00 00	LL	LL	UU	PPPPPPPP	
RRRRRRRR	00 00	LL	LL	UU	PPPPPPPP	
RR RR	00 00	LL	LL	UU	PP	
RR RR	00 00	LL	LL	UU	PP	
RR RR	00 00	LL	LL	UU	PP	
RR RR	00 00	LL	LL	UU	PP	
RR RR	00 00	LL	LL	UU	PP	
RR RR	00 00	LL	LL	UU	PP	
RR RR	000000	LLLLLLLL	LLLLLLLL	UUUUUUUU	PP
RR RR	000000	LLLLLLLL	LLLLLLLL	UUUUUUUU	PP

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0002 C Version: 'V04-000'
0003 C
0004 C*****
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0023 C*
0024 C*
0025 C*****
0026 C
0027 C AUTHOR BRIAN PORTER CREATION DATE 10-SEP-1980
0028 C
0029 C++
0030 C Functional description:
0031 C
0032 C This module displays the device error roll-up report.
0033 C
0034 C Modified by:
0035 C
0036 C V03-004 SAR0257 Sharon A. Reynolds 25-Apr-1984
0037 C Widened the output field for the device names to
0038 C accomodate the node name being logged now.
0039 C
0040 C V03-003 SAR0094 Sharon A. Reynolds, 20-Jun-1983
0041 C Changed the carriage control in the 'format' statements
0042 C for use with ERF.
0043 C
0044 C V03-002 SAR009 Sharon Reynolds, 7-Apr-1983
0045 C Removed search_sid and entry_type as call parameters.
0046 C Added include statement for the 'msghdr' common which
0047 C defines the field definitions for the entry header
0048 C and equivalenced search_sid and entry_type to the
0049 C appropriate definitions.
0050 C
0051 C v03-001 BP0004 Brian Porter. 05-APR-1982
0052 C Added stuff for mscp.
0053 C++
0054 C--
0055 C
0056 C++
0057 C

```
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0065
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0090
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0097
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0099
0100
0101
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0103
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0114
```

-----+
| flink1
+-----+
| blink1
+-----+
| logging sid
+-----+
| root name flink
+-----+
| root name blink
+-----+
| name entry count
+-----+
|
-----+
| flink2
+-----+
| blink2
+-----+
| 16 bytes for name
+-----+
| string
+-----+
|
-----+
| root unit flink
+-----+
| root unit blink
+-----+
| unit entry count
+-----+
|
-----+
| flink3
+-----+
| blink3
+-----+
| ucb unit number
+-----+
| device hard error count
+-----+
| device soft error count
+-----+
| timeout hard error count
+-----+
| timeout soft error count
+-----+
| ucb unit operation count
+-----+
| ucb unit error count
+-----+
| pack count
+-----+

```
0115 C      |
0116 C      +--+
0117 C      |      current label      |
0118 C      |      previous error    |
0119 C      |
0120 C      +-----+
0121 C--
```

0123

```
0124 subroutine rollup (search_name_length,search_name_string,
0125 1 search_unit,iosb,ucb$1_opcnt,ucb$w_errcnt)
```

0127

```
0128 include 'SRC$:MSGHDR.FOR /NOLIST'      ! EMB entry header definitions
```

0188

```
0189 byte      lun
0190
0191 integer*4  buffer0(3)
0192
0193 integer*4  root_logging_sid_flink
0194
0195 integer*4  root_logging_sid_blink
0196
0197 integer*4  logging_sid_entry_count
0198
0199 equivalence (emb$1_hd_sid,search_sid)
0200
0201 equivalence (emb$w_hd_entry,entry_type)
0202
0203 equivalence (buffer0(1),root_logging_sid_flink)
0204
0205 equivalence (buffer0(2),root_logging_sid_blink)
0206
0207 equivalence (buffer0(3),logging_sid_entry_count)
0208
0209 integer*4  buffer1(6)
0210
0211 integer*4  flink1
0212
0213 integer*4  blink1
0214
0215 integer*4  logging_sid
0216
0217 integer*4  root_name_flink
0218
0219 integer*4  root_name_blink
0220
0221 integer*4  name_entry_count
0222
0223 equivalence (buffer1(1),flink1)
0224
0225 equivalence (buffer1(2),blink1)
0226
0227 equivalence (buffer1(3),logging_sid)
0228
0229 equivalence (buffer1(4),root_name_flink)
```

0230 equivalence (buffer1(5),root_name_blink)
0231 equivalence (buffer1(6),name_entry_count)
0232 integer*4 buffer2(9)
0233 integer*4 flink2
0234 integer*4 blink2
0235 byte name_string_array(0:15)
0236 byte name_string_length
0237 character*15 name_string
0238 equivalence (name_string_array(0),name_string_length)
0239 equivalence (name_string_array(1),name_string)
0240 integer*4 root_unit.flink
0241 integer*4 root_unit.blink
0242 integer*4 unit_entry_count
0243 equivalence (buffer2(1),flink2)
0244 equivalence (buffer2(2),blink2)
0245 equivalence (buffer2(3),name_string_array)
0246 equivalence (buffer2(7),root_unit.flink)
0247 equivalence (buffer2(8),root_unit.blink)
0248 equivalence (buffer2(9),unit_entry_count)
0249 integer*4 buffer3(13)
0250 integer*4 flink3
0251 integer*4 blink3
0252 integer*4 ucb_unit_number
0253 integer*4 device_hard_error_count
0254 integer*4 device_soft_error_count
0255 integer*4 timeout_hard_error_count
0256 integer*4 timeout_soft_error_count
0257 integer*4 ucb_unit_operation_count
0258
0259
0260
0261
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0263
0264
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0266
0267
0268
0269
0270
0271
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0277
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0280
0281
0282
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0284
0285
0286

```
0287      integer*4      ucb_unit_error_count
0288      integer*4      pack_count
0289      byte           previous_label_at_error_array(12)
0290      character*12   previous_label_at_error
0291      equivalence    (previous_label_at_error_array,previous_label_at_error)
0292      equivalence    (buffer3(1),flink3)
0293      equivalence    (buffer3(2),blink3)
0294      equivalence    (buffer3(3),ucb_unit_number)
0295      equivalence    (buffer3(4),device_hard_error_count)
0296      equivalence    (buffer3(5),device_soft_error_count)
0297      equivalence    (buffer3(6),timeout_hard_error_count)
0298      equivalence    (buffer3(7),timeout_soft_error_count)
0299      equivalence    (buffer3(8),ucb_unit_operation_count)
0300      equivalence    (buffer3(9),ucb_unit_error_count)
0301      equivalence    (buffer3(10),pack_count)
0302      equivalence    (buffer3(11),previous_label_at_error_array)
0303      integer*4      logging_sid_entry_address
0304      integer*4      name_entry_address
0305      integer*4      unit_entry_address
0306      character*15   search_name
0307      character*12   current_label_at_error
0308      logical*1      lib$extzv
0309      logical*1      lib$get_vm
0310      integer*4      search_sid
0311      byte           search_name_length
0312      character*15   search_name_string
0313      integer*2      search_unit
0314      integer*2      entry_type
0315      integer*4      compress4
```

```
0344
0345      integer*4      column
0346
0347      integer*4      iosb
0348
0349      integer*4      ucb$1_opcnt
0350
0351      integer*2      ucb$w_errcnt
0352
0353      integer*i      device_count
0354
0355      integer*4      insert_blink
0356
0357
0358
0359      call movc5 (%val(search_name_length),%ref(search_name_string),%val(42),
0360      1 %val(15),%ref(search_name))
0361
0362      logging_sid_entry_address = root_logging_sid.flink
0363
0364      do 50,i = 1,logging_sid_entry_count
0365
0366      call movc3 (%val(24),%val(logging_sid_entry_address),buffer1)
0367
5       if (search_sid .eq. logging_sid) then
0369
0370      name_entry_address = root_name.flink
0371
0372      do 40,j = 1,name_entry_count
0373
0374      call movc3 (%val(36),%val(name_entry_address),buffer2)
0375
0376
10      if (search_name .eq. name_string) then
0377
0378      unit_entry_address = root_unit.flink
0379
0380      do 30,k = 1,unit_entry_count
0381
0382      call movc3 (%val(52),%val(unit_entry_address),buffer3)
0383
0384
15      if (search_unit .eq. ucb_unit_number) then
0385
0386
0387      if (
0388      1 ucb$1_opcnt .ne. -1
0389      1 .and.
0390      1 ucb$w_errcnt .ne. -1
0391      1 ) then
0392
0393      if (
0394      1 ucb_unit_operation_count .eq. -1
0395      1 .and.
0396      1 ucb_unit_error_count .eq. -1
0397      1 ) then
0398
0399      ucb_unit_operation_count = 0
0400
0400      ucb_unit_error_count = 0
```

```
0401
0402
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0437
0438
0439
0440
0441
0442
0443
0444
0445
0446
0447
0448
0449
0450
0451
0452
0453
0454
0455
0456
0457

        endif

        ucb_unit_operation_count = ucb$1_opcnt

        ucb_unit_error_count = ucb$w_errcnt
        endif

        if (iosb .ne. -1) then

            if (
1 entry_type .eq. 1
1 .or.
1 entry_type .eq. 98
1 .or.
1 entry_type .eq. 99
1 .or.
1 entry_type .eq. 100
1 ) then

                if (lib$extzv(0,1,iosb) .eq. 1) then
                    if (device_soft_error_count .eq. -1) then
                        device_soft_error_count = 0
                    endif

                    device_soft_error_count = device_soft_error_count + 1
                else
                    if (device_hard_error_count .eq. -1) then
                        device_hard_error_count = 0
                    endif

                    device_hard_error_count = device_hard_error_count + 1
                endif

                else if (entry_type .eq. 96) then
                    if (lib$extzv(0,1,iosb) .eq. 1) then
                        if (timeout_soft_error_count .eq. -1) then
                            timeout_soft_error_count = 0
                        endif

                        timeout_soft_error_count = timeout_soft_error_count + 1
                    else
                        if (timeout_hard_error_count .eq. -1) then
                            timeout_hard_error_count = 0
                        endif

                        timeout_hard_error_count = timeout_hard_error_count + 1
                    endif
                endif
            endif
        endif
    endif
endif
```

```
0458
0459
0460     endif
0461
0462     call get_current_label(3,search_sid,search_name_length,
0463     i search_name_string,search_unit,%ref(current_label_at_error),*20)
0464
0465     if (current_label_at_error .ne. previous_label_at_error) then
0466
0467         pack_count = pack_count + 1
0468
0469         previous_label_at_error = current_label_at_error
0470     endif
0471
0472     20     call movc3 (%val('44),ucb_unit_number,%val(unit_entry_address + 8))
0473
0474     return
0475     endif
0476
0477     insert_blink = blink3
0478
0479     if (ucb_unit_number .gt. search_unit) goto 35
0480
0481     30     unit_entry_address = flink3
0482
0483     continue
0484
0485     35     insert_blink = root_unit_blink
0486
0487     call movc5 (%val(0),,%val(0),%val(52),buffer3)
0488
0489     if (lib$get_vm(((52+7)/8)*8,unit_entry_address)) then
0490
0491         call insque (%val(unit_entry_address),%val(insert_blink))
0492
0493         ucb_unit_number = search_unit
0494
0495         device_hard_error_count = -1
0496
0497         device_soft_error_count = -1
0498
0499         timeout_hard_error_count = -1
0500
0501         timeout_soft_error_count = -1
0502
0503         ucb_unit_operation_count = -1
0504
0505         ucb_unit_error_count = -1
0506
0507         unit_entry_count = unit_entry_count + 1
0508
0509         call movl (unit_entry_count,%val(name_entry_address + 32))
0510
0511         goto 15
0512     endif
0513
0514     return
0515
0516
```

```
0515     name_entry_address = flink2
0516
0517 40     continue
0518
0519     call movc5 (%val(0),,%val(0),%val(36),buffer2)
0520
0521     if (lib$get_vm(((36+7)/8)*8,name_entry_address)) then
0522
0523     call insque (%val(name_entry_address),%val(root_name_blink))
0524
0525     name_string_length = search_name_length
0526
0527     name_string = search_name
0528
0529     root_unit_flink = name_entry_address + 24
0530
0531     root_unit_blink = root_unit_flink
0532
0533     call movc3 (%val(28),name_string_length,%val(name_entry_address + 8))
0534
0535     name_entry_count = name_entry_count + 1
0536
0537     call movl (name_entry_count,%val(logging_sid_entry_address + 20))
0538
0539     goto 10
0540     endif
0541
0542     return
0543     endif
0544
0545     logging_sid_entry_address = flink1
0546
0547 50     continue
0548
0549     call movc5 (%val(0),,%val(0),%val(24),buffer1)
0550
0551     if (lib$get_vm(((24+7)/8)*8,logging_sid_entry_address)) then
0552
0553     if (logging_sid_entry_count .eq. 0) then
0554
0555     root_logging_sid_flink = %loc(root_logging_sid_flink)
0556
0557     root_logging_sid_blink = root_logging_sid_flink
0558     endif
0559
0560     call insque (%val(logging_sid_entry_address),
0561     1 %val(root_logging_sid_blink))
0562
0563     logging_sid = search_sid
0564
0565     root_name_flink = logging_sid_entry_address + 12
0566
0567     root_name_blink = root_name_flink
0568
0569     call movc3 (%val(16),logging_sid,%val(logging_sid_entry_address + 8))
0570
0571     logging_sid_entry_count = logging_sid_entry_count + 1
```

```
0572  
0573     goto 5  
0574  endif  
0575  
0576  return  
0577  
0578  
0579  
0580  
0581  entry display_rollup (lun)  
0582  
0583  
0584  
0585  
0586  logging_sid_entry_address = root_logging_sid_flink  
0587  
0588  do 100,i = 1,logging_sid_entry_count  
0589  
0590  call movc3 (%val(24),%val(logging_sid_entry_address),buffer1)  
0591  
0592  call frctof (lun)  
0593  
0594  call linchk (lun,7)  
0595  
0596  55  write(lun,55) logging_sid  
0597  format(' ','DEVICE ROLLUP LOGGED BY SID ',z8.8,:a,/) 063  
0598  
0599  60  write(lun,60)  
0600  format(' ','DEVICE',t23,'ERROR BITS',t51,'ERRORS THIS', 063  
0601  1 t64,'QIOS THIS',/ 063  
0602  1 t26,'SET',t38,'QIO TIMEOUT',t53,'SESSION',t65,'SESSION') 063  
0603  
0604  65  write(lun,65)  
0605  format(' ',t21,['HARD'],t28,['SOFT'], 064  
0606  1 t36,['HARD'],t43,['SOFT']) 064  
0607  
0608  device_count = 0 065  
0609  
0610  name_entry_address = root_name_flink 065  
0611  
0612  do 90,j = 1,name_entry_count 065  
0613  
0614  call movc3 (%val(36),%val(name_entry_address),buffer2) 065  
0615  
0616  unit_entry_address = root_unit_flink 065  
0617  
0618  do 80,k = 1,unit_entry_count 066  
0619  
0620  if (device_count .eq. 23) then  
0621  
0622  call frctof (lun)  
0623  
0624  device_count = 0  
0625  endif  
0626  
0627  call movc3 (%val(44),%val(unit_entry_address),buffer3)  
0628
```

```
0629         call linchk (lun,2)
0630
0631         write(lun,66)
0632         format(',,')
0633
0634         write(lun,67), name_string,ucb_unit_number
0635         format(',,a<name string length>,
0636         1 i<compress4 (ucb_unit_number)>,:')
0637
0638         column = name_string_length + (compress4 (ucb_unit_number)) +
0639
0640         if (device_hard_error_count .EQ. -1) then
0641             Device_hard_error_count = 0
0642         Endif
0643
0644         if (device_soft_error_count .EQ. -1) then
0645             Device_soft_error_count = 0
0646         Endif
0647
0648         if (timeout_hard_error_count .EQ. -1) then
0649             Timeout_hard_error_count = 0
0650         Endif
0651
0652         if (timeout_soft_error_count .EQ. -1) then
0653             Timeout_soft_error_count = 0
0654         Endif
0655
0656         if (ucb_unit_error_count .EQ. -1) then
0657             Ucb_unit_error_count = 0
0658         Endif
0659
0660         if (ucb_unit_operation_count .EQ. -1) then
0661             Ucb_unit_operation_count = 0
0662         Endif
0663
0664         write(lun,69) device_hard_error_count,device_soft_error_count,
0665         1 timeout_hard_error_count,timeout_soft_error_count,
0666         2 ucb_unit_error_count,ucb_unit_operation_count
0667
0668         69     format(T21,15,' ',T28,15,'',
0669         1 T36,15,'',T43,15,'',T53,16,'',T64,17,'')
0670
0671
0672         device_count = device_count + 1
0673
0674         unit_entry_address = flink3
0675
0676         80     continue
0677
0678         name_entry_address = flink2
0679
0680         90     continue
0681
0682         logging_sid_entry_address = flink1
0683
0684         100    continue
0685
```

0686 return
 0687
 0688 end

PROGRAM SECTIONS

Name	Bytes	Attributes
0 \$CODE	1477	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 \$PDATA	288	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 \$LOCAL	588	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 EMB	512	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	2865	

ENTRY POINTS

Address	Type	Name	Address	Type	Name
0-00000357		DISPLAY_ROLLUP	0-00000000		ROLLUP

VARIABLES

Address	Type	Name	Address	Type	Name
2-00000005C	I*4	BLINK1	2-000000038	I*4	BLINK2
2-00000004	I*4	BLINK3	2-0000000A4	I*4	COLUMN
2-000000088	CHAR	CURRENT_LABEL_AT_ERROR	2-0000000A8	I*4	DEVICE_COUNT
2-00000000C	I*4	DEVICE_HARD_ERROR_COUNT	2-000000010	I*4	DEVICE_SOFT_ERROR_COUNT
3-000000000	I*4	EMBSL_AD_SID	3-000000004	I*2	EMBSW_AD_ENTRY
3-00000000E	I*2	EMBSW_HD_ERRSEQ	3-000000004	I*2	ENTRY_TYPE
2-000000058	I*4	FLINK1	2-000000034	I*4	FLINK2
2-000000000	I*4	FLINK3	2-0000000B0	I*4	I
2-0000000AC	I*4	INSERT_BLINK	AP-000000010a	I*4	IOSB
2-000000084	I*4	J	2-0000000B8	I*4	K
2-000000060	I*4	LOGGING_SID	2-000000098	I*4	LOGGING_SID_ENTRY_ADDRESS
2-000000078	I*4	LOGGING_SID_ENTRY_COUNT	AP-000000040a	L*1	LUN
2-00000009C	I*4	NAME_ENTRY_ADDRESS	2-00000006C	I*4	NAME_ENTRY_COUNT
2-00000003D	CHAR	NAME_STRING	2-00000003C	L*1	NAME_STRING_LENGTH
2-000000024	I*4	PACK_COUNT	2-000000028	CHAR	PREVIOUS_LABEL_AT_ERROR
2-000000074	I*4	ROOT_LOGGING_SID_BLINK	2-000000070	I*4	ROOT_LOGGING_SID_FLINK
2-000000068	I*4	ROOT_NAME_BLINK	2-000000064	I*4	ROOT_NAME_FLINK
2-000000050	I*4	ROOT_UNIT_BLINK	2-00000004C	I*4	ROOT_UNIT_FLINK
2-00000007C	CHAR	SEARCH_NAME	AP-000000040a	L*1	SEARCH_NAME_LENGTH
AP-000000080a	CHAR	SEARCH_NAME_STRING	3-000000000	I*4	SEARCH_SID
AP-00000000C0	I*2	SEARCH_UNIT	2-000000014	I*4	TIMEOUT_HARD_ERROR_COUNT
2-000000018	I*4	TIMEOUT_SOFT_ERROR_COUNT	AP-0000000140a	I*4	UCBSL_OPCNT
AP-0000000180	I*2	UCBSW_ERRCNT	2-000000020	I*4	UCB_UNIT_ERROR_COUNT
2-000000008	I*4	UCB_UNIT_NUMBER	2-000000010	I*4	UCB_UNIT_OPERATION_COUNT
2-0000000A0	I*4	UNIT_ENTRY_ADDRESS	2-000000054	I*4	UNIT_ENTRY_COUNT

ARRAYS

Address	Type	Name	Bytes	Dimensions
2-00000070	I*4	BUFFER0	12	(3)
2-00000058	I*4	BUFFER1	24	(6)
2-00000034	I*4	BUFFER2	36	(9)
2-00000000	I*4	BUFFER3	52	(13)
3-00000000	L*1	EMB	512	(0:511)
3-00000006	I*4	EMBSQ HD TIME	8	(2)
2-0000003C	L*1	NAME STRING ARRAY	16	(0:15)
2-00000028	L*1	PREVIOUS_LABEL_AT_ERROR_ARRAY	12	(12)

LABELS

Address	Label										
0-0000004P	5	0-0000007C	10	0-000000AE	15	0-000001CB	20	**	30	0-00000204	35
** 40	** 40	** 50	** 50	1-00000020	55	1-00000049	60	1-000000AD	65	1-000000DA	66
1-000000DF	67	1-000000F5	69	**	80	**	90	**	100		

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name
I*4	COMPRESS4			L*1	FRCTOF
	INSQUE			L*1	LIB\$EXTZV
	LINCHK				MOV C3
	MOVL				
				L*1	GET_CURRENT_LABEL
				L*1	LIB\$GET_VM
					MOV C5

COMMAND QUALIFIERS

FORTRAN /LIS=LISS:ROLLUP/OBJ=OBJ\$:ROLLUP MSRC\$:ROLLUP
 /CHECK=(NOBOUNDS,OVERFLOW,NOUNDERFLOW)
 /DEBUG=(NOSYMBOLS,TRACEBACK)
 /STANDARD=(NOSYNTAX,NOSOURCE FORM)
 /SHOW=(NOPREPROCESSOR,NOINCLUDE,MAP)
 /F77 /NOG_FLOATING /I4 /OPTIMIZE /WARNINGS /NOD_LINES /NOCROSS_REFERENCE /NOMACHINE_CODE /CONTINUATIONS=19

COMPILATION STATISTICS

Run Time: 5.92 seconds
 Elapsed Time: 14.57 seconds
 Page Faults: 197
 Dynamic Memory: 218 pages

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